



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0817; Directorate Identifier 99-NE-24-AD; Amendment 39-17438; AD 2013-08-20]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for certain General Electric Company (GE) CF6-80C2 series turbofan engines. That AD currently requires replacement of the fuel tube connecting the flowmeter to the integrated drive generator (IDG) fuel-oil cooler and the fuel tube(s) connecting the main engine control (MEC) or hydromechanical (HMU) to the flowmeter, with improved fuel tubes. This new AD requires the same actions, requires installation of a new simplified one-piece supporting bracket, adds an engine model, alters the list of affected part numbers (P/Ns), changes the replacement schedule, and revises our estimated cost of compliance. This AD was prompted by several additional reports of fuel leaks and two reports of engine fire due to improper assembly of supporting brackets on the fuel tube connecting the flowmeter to the IDG fuel-oil cooler. We are issuing this AD to prevent high-pressure fuel leaks caused by improper seating of fuel tube flanges, which could result in an engine fire and damage to the airplane.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this AD, contact General Electric

Company, GE-Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215, phone: 513-552-3272; email: geae.aoc@ge.com. You may view the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kasra Sharifi, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7773; fax: 781-238 7199; email: kasra.sharifi@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On February 29, 2000, the Office of the Federal Register (OFR) published AD 2000-04-14, Amendment 39-11597 (65 FR 10698). That AD applies to the specified products, and required replacement of the fuel tube connecting the flowmeter to the IDG fuel-oil cooler and the fuel tube(s) connecting the MEC or HMU to the flowmeter with improved fuel tubes.

On August 13, 2012, the OFR published a notice of proposed rulemaking (NPRM) (77 FR 48110) to supersede AD 2000-04-14 (65 FR 10698, February 29, 2000).

The NPRM proposed to require replacement of the fuel tubes connected to the fuel flowmeter and to install a new simplified one-piece bracket to eliminate improper assembly. Thereafter, based on comments received in response to the NPRM, we issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 to change the proposed AD further. The SNPRM published in the Federal Register on December 31, 2012 (77 FR 76977).

The SNPRM proposed to require the same actions as the original AD, to add an engine model, alter the list of affected P/Ns, change the replacement schedule, and revise our estimated cost of compliance.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and the FAA's response to each comment.

Request to Identify Spray Shield Part Numbers (P/Ns)

Lufthansa Technik and Air France Industries requested that we identify which P/Ns are the spray shield P/Ns. As-written, the applicability does not distinguish between the tube P/Ns and the spray shield P/Ns.

We agree. We changed the AD to identify the spray shield P/Ns in the AD.

Request to Add Engine Shop Visit Definition

Atlas Air requested that we add a definition for engine shop visit to clarify the compliance.

We agree. We changed the AD to add a definition for shop visit. The definition states "For the purpose of this AD, an engine shop visit is the induction of an engine into the shop for maintenance involving separation of pairs of major mating engine flanges (lettered flanges), except that the separation of engine flanges solely for the purposes of

transporting the engine without subsequent engine maintenance does not constitute an engine shop visit.”

Request to Provide Instructions for Installation

American Airlines requested that we provide instructions for installation of the mandated P/Ns to prevent the unsafe condition, or, require corrections to the Boeing and GE guidance documents before the AD is issued. They cite discrepancies in the guidance documents.

We do not agree. An operator may use any method, technique, or practice acceptable to the Administrator when performing maintenance. We did not change the AD.

We recognize that discrepancies may exist in manufacturers’ service information. However, correcting errors in manufacturers’ service information is not within the scope of this AD. We did not change the AD.

Request to Address Another Possible Unsafe Condition

American Airlines requested that we also address another possible unsafe condition caused by improper assembly of the two-piece spray shield bracket on the forward end of the flowmeter transmitter. The commenter states that this bracket has the same potential to be improperly assembled as the subject bracket of this AD.

We do not agree. To-date, we have received no reports of improper assembly or fuel leaks occurring at that location. We did not change the AD.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM (77 FR 76977, December 31, 2012) for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the SNPRM (77 FR 76977, December 31, 2012).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

We estimate that this AD will affect 926 GE CF6-80C2 engines installed on airplanes of U.S. registry. We also estimate that one hour will be required per engine to accomplish the actions required by this AD. The average labor rate is \$85 per hour. We also estimate that the required parts will cost about \$370 per engine. We estimate that the cost of the idle leak check is \$1,000 per engine. Based on these figures, we estimate the total cost of the AD to U.S. operators is \$3,275,231.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on

the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2000-04-14, Amendment 39-11597 (65 FR 10698, February 29, 2000), and adding the following new AD:

2013-08-20 **General Electric Company:** Amendment 39-17438; Docket No. FAA-2012-0817; Directorate Identifier 99-NE-24-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2000-04-14, Amendment 39-11597 (65 FR 10698, February 29, 2000).

(c) Applicability

This AD applies to all General Electric Company (GE) CF6-80C2 A1/A2/A3/A5/A8/A5F/B1/B2/B4/B5F/B6/B1F/B2F/B4F/B6F/B7F/D1F turbofan engines with any of the following installed:

- (1) Fuel tube, part number (P/N) 1321M42G01, 1334M88G01, 1374M30G01, or 1383M12G01.
- (2) Spray shield, P/N 1606M57G01, 1606M57G03, or 1775M61G01.
- (3) Supporting bracket, P/N 1321M88P001A.

(d) Unsafe Condition

This AD was prompted by several additional reports of fuel leaks and two reports of engine fire due to improper assembly of supporting brackets on the fuel tube connecting the flowmeter to the integrated drive generator (IDG) fuel-oil cooler. We are issuing this AD to prevent high-pressure fuel leaks caused by improper seating of fuel tube flanges, which could result in an engine fire and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(f) Replacement

After the effective date of this AD, if the fuel tubes are disconnected for any reason, or at the next engine shop visit, whichever occurs first, replace the fuel tubes and brackets with improved tubes and brackets eligible for installation. For on-wing

maintenance, replace only tubes and brackets that have been disconnected. Do the following:

- (1) Replace the fuel flowmeter to IDG fuel-oil cooler fuel tube, P/N 1321M42G01, with a part eligible for installation.
- (2) For engines with Power Management Controls, replace the main engine control to fuel flowmeter fuel tube, P/N 1334M88G01, with a part eligible for installation.
- (3) For engines with full authority digital electronic controls, replace the hydromechanical unit to fuel flowmeter fuel tubes, P/Ns 1383M12G01 and 1374M30G01, with a part eligible for installation.
- (4) Replace supporting bracket, P/N 1321M88P001A, and spray shields, P/Ns 1606M57G01, 1606M57G03, and 1775M61G01 with one-piece supporting bracket, P/N 2021M83G01.
- (5) Perform an idle leak check after accomplishing paragraphs (f)(1), (f)(2), (f)(3), or (f)(4), or any combination thereof.

(g) Prohibition

After the effective date of this AD, do not install any of the following parts into any GE CF6-80C2 series turbofan engines: fuel tubes P/Ns 1321M42G01, 1334M88G01, 1374M30G01, and 1383M12G01, supporting bracket P/N 1321M88P001A, and spray shields P/Ns 1606M57G01, 1606M57G03, and 1775M61G01.

(h) Definition

For the purpose of this AD, an engine shop visit is the induction of an engine into the shop for maintenance involving separation of pairs of major mating engine flanges (lettered flanges), except that the separation of engine flanges solely for the purposes of transporting the engine without subsequent engine maintenance does not constitute an engine shop visit.

(i) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(j) Related Information

(1) For more information about this AD, contact Kasra Sharifi, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7773; fax: 781-238 7199; email: kasra.sharifi@faa.gov.

(2) For guidance on the replacements, refer to GE Alert Service Bulletins CF6-80C2 SB 73-A0224, CF6-80C2 SB 73-A0231, CF6-80C2 SB 73-A0401, and CF6-80C2 SB 73-0242.

(3) For service information identified in this AD, contact General Electric Company, GE-Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215, phone: 513-552-3272; email: geae.aoc@ge.com. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(k) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on April 16, 2013.

Frank P. Paskiewicz,
Acting Director,
Aircraft Certification Service.

[FR Doc. 2013-09650 Filed 04/25/2013 at 8:45 am; Publication Date: 04/26/2013]